

# CURRICULUM VITAE

## DANIEL N. COX, PH.D.

GEORGIA STATE UNIVERSITY  
NEUROSCIENCE INSTITUTE  
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### ACADEMIC TRAINING

INSTITUTION/ LOCATION	DEGREE	EFFECTIVE DATES	FIELD OF STUDY	RESEARCH MENTOR
UCSF San Francisco, CA	Postdoctoral	2000-2004	Neuroscience	Yuh-Nung Jan, Ph.D.
Duke University Durham, NC	Ph.D.	1994-1999	Cell Biology	Haifan Lin, Ph.D.
Wake Forest University, Winston-Salem, NC	B.S. with Honors	1989-1992	Biology	Nina S. Allen, Ph.D.

### PROFESSIONAL EXPERIENCE

ASSOCIATE PROFESSOR OF NEUROSCIENCE 2014 - PRESENT  
Neuroscience Institute  
Center for Behavioral Neuroscience  
Center for Neuromics  
Georgia State University, Atlanta, GA

AFFILIATE FACULTY MEMBER 2014 - PRESENT  
School of Systems Biology, Dept. Molecular Neuroscience, Krasnow Institute  
George Mason University

ASSOCIATE PROFESSOR OF SYSTEMS BIOLOGY 2010 – 2014  
School of Systems Biology  
George Mason University

GRADUATE PROGRAM DIRECTOR 2008 – 2014  
School of Systems Biology  
Biosciences Ph.D. Program (BIOS) and M.S. Biology Program (BIOL)  
George Mason University

AFFILIATE FACULTY MEMBER 2010 – 2014  
Honors College  
George Mason University

AFFILIATE FACULTY MEMBER 2009 – 2014  
Department of Molecular Neuroscience  
George Mason University, Fairfax, VA, USA

<u>AFFILIATE FACULTY MEMBER</u> “G <sup>2</sup> ” Advanced Biomedical Sciences Program George Mason and Georgetown Universities (G <sup>2</sup> Program)	2013 – 2014
<u>DIRECTOR OF CONFOCAL AND CELLULAR IMAGING FACILITIES</u> George Mason University	2006 – 2014
<u>ASSISTANT PROFESSOR</u> Dept. of Molecular and Microbiology Krasnow Institute for Advanced Study George Mason University	2004 – 2010
<u>HOWARD HUGHES MEDICAL INSTITUTE RESEARCH ASSOCIATE</u> Laboratory of Professor Yuh-Nung Jan, Ph.D. HHMI and Department of Physiology, UCSF, San Francisco, CA, USA.	2003 – 2004
<u>JANE COFFIN CHILDS POSTDOCTORAL FELLOW</u> Laboratory of Professor Yuh-Nung Jan, Ph.D. HHMI and Department of Physiology, UCSF, San Francisco CA, USA	2000 - 2003
<u>NIH PRE-DOCTORAL FELLOW</u> Laboratory of Professor Haifan Lin, Ph.D. Department of Cell Biology, Duke University Medical Center, Durham, NC, USA.	1994 – 1999
<u>RESEARCH TECHNICIAN</u> Laboratory of Professor Gloria K. Muday, Ph.D. Department of Biology, Wake Forest University, Winston-Salem, NC, USA.	1992 – 1994
<u>RESEARCH ASSISTANT – SENIOR UNDERGRADUATE THESIS</u> Laboratory of Professor Nina Stromgren Allen, Ph.D. Department of Biology, Wake Forest University, Winston-Salem, NC, USA. Video Microscopy Facility, Marine Biological Laboratories, Woods Hole, MA, USA.	1990 – 1992

#### **ACADEMIC HONORS AND AWARDS**

2014	Career Connection Faculty Award, University Career Services, GMU ( <b>1 of 20</b> ) University-wide
2014	GMU Leadership Legacy Program (2014-15)
2014	Faculty Election to <i>Phi Kappa Phi</i> , George Mason Univ. Chapter
2013	University Teaching Excellence Award, Center for Teaching & Faculty Excellence, GMU ( <b>1 of 8 awarded University-wide</b> ) ( <a href="http://ctfe.gmu.edu/awards/teaching-excellence-award-winners/">http://ctfe.gmu.edu/awards/teaching-excellence-award-winners/</a> )
2012	National Award, Council on Undergraduate Research (CUR), Biology Division, Outstanding Mentor Award ( <b>1 of 3 awarded nationally</b> )
2012-13	College of Science Teaching Excellence Award, GMU ( <b>1 of 3 awarded College-wide</b> )
2012	NIH ECR Program, Center for Scientific Review
2012	Inaugural Office of Scholarship, Creative Activities and Research (OSCAR) Mentoring Excellence Award ( <b>1 of 5 awarded University-wide</b> ), GMU ( <a href="http://oscar.gmu.edu/fac-staff/OSCAR-Mentor-Award-Winners.cfm">http://oscar.gmu.edu/fac-staff/OSCAR-Mentor-Award-Winners.cfm</a> )
2012-13	Siemens and Intel STS Competition Mentor Awards (Suhas Gondi), GMU
2012	Intel STS Mentor Award (Rithvik Prasannappa), GMU

- 2011 J. Shelton Horsley Research Award, Highest Honor Bestowed by the Virginia Academy of Science (<http://news.gmu.edu/articles/6766>)
- 2010-11 College of Science Teaching Excellence Award, School of Systems Biology, GMU
- 2010 Siemens Competition Mentor Award (Madhu Karamsetty), GMU
- 2009-2010 Siemens Competition and Intel STS Mentor Awards (Dennis Wang), GMU
- 2007 Society for Developmental Biology Faculty Travel Award, GMU
- 2003-2004 Howard Hughes Medical Institute Research Associate, UCSF
- 2000-2003 Jane Coffin Childs Postdoctoral Fellow, UCSF
- 2000 NIH, NRSA F32 Postdoctoral Award (declined to accept Jane Coffin Childs), UCSF
- 2000 Inaugural Harold M. Weintraub Graduate Student Award, Fred Hutchison Cancer Research Center (**1 of 17 awarded internationally**)
- 2000 1<sup>st</sup> Runner-Up, Larry Sandler Memorial Award, Genetics Society of America
- 1994-1999 NIH Pre-doctoral Fellowship, Duke University
- 1993 John Bowley Derieux Award for Research Excellence, Wake Forest University
- 1993 Carolina Biological Supply Company Best Undergraduate Thesis Award, Wake Forest University
- 1993 *Alpha Epsilon Delta* GAMMA Award for Research Excellence, Wake Forest University
- 1992 *Magna Cum Laude* with Honors in Biology, Wake Forest University
- 1992 Howard Hughes Medical Institute Undergraduate Research Fellowship, Wake Forest University
- 1992 *Sigma Xi* Research Award, Wake Forest University
- 1991 Spires of Excellence Research Fellow, Wake Forest University
- 1990-1992 William L. Wyatt Scholar in Biology, Wake Forest University

#### **PROFESSIONAL MEMBERSHIPS**

- Genetics Society of America
- Society for Developmental Biology
- Society for Neuroscience
- Central Virginia Chapter of the Society for Neuroscience (CVCSN)
- Council on Undergraduate Research (CUR)
- Virginia Academy of Science
- *Sigma Xi* Scientific Research Society
- *Phi Beta Kappa*
- *Phi Kappa Phi*

#### **PROFESSIONAL SERVICE**

##### **EDITORIAL BOARDS AND JOURNAL REVIEWER**

- Editorial Board, *The Biological Bulletin*, Marine Biological Labs, Highwire Press
- Editorial Board, *Journal of Visualized Experiments*
- *ad hoc* reviewer for numerous journals including: *Current Biology*, *Science*, *Journal Visualized Experiments (JoVE)*, *DNA and Cell Biology*, *Frontiers in Cellular Neuroscience*, *PLoS ONE*; *PLoS GENETICS*, *BMC Neuroscience*; *Genetics*, *Development*

##### **GRANT STUDY SECTIONS AND FELLOWSHIP COMPETITIONS**

- NIH ECR CSR - (2) Study Section (NDPR/MDCN)
- Wellcome Trust, UK, Invited Grant Reviewer
- Israel Science Foundation, Invited Grant Reviewer
- National Science Foundation, MRI Study Section, *ad hoc* review panelist
- National Science Foundation, Graduate Research Fellowship, Review Panelist

- SMART (Science, Mathematics and Research for Transformation) Fellowship, Dept. of Defense, Review Panelist
- National Defense Science & Engineering Graduate Fellowship, Dept. of Defense, Review Panelist
- Research Committee Member, Virginia Academy of Sciences (2012-2015)

#### **UNIVERSITY SERVICE (GMU)**

- Graduate Program Director, Biosciences Ph.D. and M.S. Biology Programs (2008-Present)
- Director, Confocal & Cellular Imaging Facilities (2006-Present)
- Chair, Life Sciences & MMB Committee on Space and Resources (2008-2010)
- Chair, SACS Review Committee for Biosciences Ph.D. and M.S. Biology
- Chair, Graduate Program Curriculum Committee, School of Systems Biology
- Chair, Promotion and Tenure Committee, School of Systems Biology (2011-14)
- Chair, Neuroscience Advisory Council (NAC) (2014-15)
- Krasnow Institute for Advanced Study, Level 1 and 2, Promotion and Tenure Committee (2012-15)
- Acting Director, Neuroscience Ph.D. program (starting Jan. 2013 – Fall 2013)
- College of Science, Academic Program Review Committee, Provost Appointee
- College of Science Curriculum Committee, Dept. Representative
- Biology (B.A./B.S.) Undergraduate Steering Committee
- Neuroscience (B.A./B.S.) Undergraduate Steering Committee
- USA Science and Engineering Festival Steering Committee, 2010
- University Committee on Intellectual Property
- Biosciences (BIOS) and Biology (MS) Graduate Admissions Committee
- Director's Advisory Committee, School of Systems Biology
- Director's Advisory Committee, Krasnow Institute for Advanced Study
- Medical Sciences Advisory Committee (MSAC)
- Executive Member, College of Science Representative, Neuroscience Advisory Council (NAC)
- *Students As Scholars* QEP Subcommittee, Student Scholarly Activities (2012-Present)
- Treasurer, George Mason University Chapter, *Sigma Xi* Scientific Research Society (2011-13)
- Teaching Excellence Award Committee, Center for Teaching & Faculty Excellence (2013-14)

#### **COMMUNITY SERVICE**

- Guest Lecturer, Arlington Learning in Retirement Institute, Stem Cell Biology
- Guest Lecturer, Osher Lifetime Learning Institute, Stem Cells and Regenerative Medicine
- Guest Lecturer, Osher Lifetime Learning Institute, Modern Methods in Neuroscience
- Guest Lecturer, Northern Virginia Community College
- Grand Prize Judge, Virginia Regional and State High School Science Fair Competitions
- Science Fair Judge, Academy of Science, Loudoun, VA
- Mentor, Aspiring Scientists Summer Internship Program (ASSIP) (GMU)
- *USA Science and Engineering Festival*

#### **TEACHING EXPERIENCE (\*-indicates new course developed)**

##### **UNDERGRADUATE LECTURE COURSES:**

**BIOL 213** – Cell Structure and Function (S'07; F'08; S'09) – Intro course for Biology majors

**BIOL 311** – General Genetics (S'08)

**BIOL 417** – Stem Cell Biology and Regenerative Medicine (\*) (Sum'07-'13)

**BIOL 435** – Developmental Biology (\*) (S'12)

##### **UNDERGRADUATE INDIVIDUALIZED INSTRUCTION COURSES (EXPERIENTIAL LEARNING):**

**BIOL 493** – Honors Research in Biology (F'09; S'11; S'12; S'13; F'13; S'14)

**BIOL 495** – Directed Studies in Biology (F'06; S'11)

**BIOL 497** – Special Problems in Biology (F'06; S'07; S'09; Sum'10; F'10; S'11; Sp'12; Sum'12)  
**BIOL 499** – Research in Biology (\*) (Research Semester) (F'12; F'13)

**GRADUATE LECTURE COURSES:**

**BIOL 508** – Stem Cells and Regenerative Medicine (\*) (Sum'06-'08)  
**BIOL 682** – Advanced Eukaryotic Molecular Cell Biology (\*) (S'08; F'09; F'10; F'11'; F'12; F'13)  
**BIOL 691** – Current Topics in Biology – Eukaryotic Cell (\*) (S'06)  
**BIOL 695 / BIOS 704** – Topics in Biosciences – Small RNA Biology (\*) (F'07)  
**BIOL 695 / BIOS 704** – Topics in Biosciences – Cell Polarity and Asymmetry (\*) (F'05; S'10)  
**BIOL 695 / BIOS 704** – Topics in Biosciences – Stem Cell Biology (\*) (S'05)  
**BIOS 744** – Molecular Genetics (F'07)  
**BMED 614** – Introduction to Neuroscience (G<sup>2</sup> MS Program in Biomedical Sciences) (\*) (S'14)

**GRADUATE INDIVIDUALIZED INSTRUCTION COURSES (EXPERIENTIAL LEARNING):**

**BIOL 693** – Directed Studies in Biology (Sum'06; F'09; S'11; F'11; S'12; F'12; S'13; F'13; S'14)  
**BIOS 703** – Laboratory Rotation (S'07; F'08; F'13; S'14)  
**BIOL 793** – Research in Biology (F'07; F'11; S'13; S'14)  
**BIOL 798** – Masters Research Project (Sum'06; S'11; F'11; S'13; F'13)  
**BIOL 799** – Thesis (Masters) (S'08; Sum'08; S'10; Sum'10; F'12; F'13; S'14)  
**BIOS 898** – Directed Studies in Biosciences (F'06; S'07; F'07; F'08; Sum'09; F'09; S'10; S'11; S'12; F'13; S'14)  
**BIOS 899** – Directed Research in Biosciences (S'07; F'07; F'08; S'09; F'09; S'10; F'10; S'11; F'11; S'12; S'14)  
**BIOS 998** – Doctoral Dissertation Proposal (every Fall/Spring 2007-Present)  
**BIOS 999** – Doctoral Dissertation Research (F'08; S'09; F'09; S'10; F'10; S'11; Sum'11; F'11; S'12; S'13; Sp'14)  
**NEUR 703** – Laboratory Rotation (F'07; S'08; F'08; S'10; S'11; F'11; S'12; Sum'12; F'12; S'13; F'13)  
**NEUR 996** – Directed Readings and Research (F'12; S'13; F'13; S'14)  
**NEUR 998** – Doctoral Dissertation Proposal (S'13; F'13; S'14)  
**BINF 796** – Directed Readings and Research (F'11)  
**BINF 799** – Thesis (Masters) (F'11; S'12; F'12; S'13)  
**BINF 996** – Directed Studies in Bioinformatics (F'13; S'14)  
**BINF 998** – Doctoral Dissertation Proposal (S'14)

**REGULAR UNDERGRADUATE AND GRADUATE GUEST LECTURES (ALL AT GMU):**

**HNRS 110** – Research Methods Colloquium, Honors Program  
**NEUR 201** – Introduction to Neuroscience  
**NEUR 410** – Current Topics in Neuroscience  
**NEUR 709** – Neuroscience Seminar  
**BIOL 494** – Honors in Biology Seminar  
**BIOS 701** – Biochemical Systematics  
**BIOS 702** – Research Methods  
**NSCI 327** – Cellular, Neurophysiological and Pharmacological Neuroscience  
**NSCI 461** – Current Topics in Neuroscience  
**BINF 732** – Genomics

**MENTORSHIP AND TRAINING**

**CURRENT POSTDOCTORAL FELLOWS**

1. Ruben Armananzas, Ph.D. (Dec. 2013-Present) (co-directed with Dr. Giorgio Ascoli)

**CURRENT DOCTORAL STUDENTS**

1. Sarah A. Trunnell (2010-Present), Biosciences Ph.D.
2. Surajit Bhattacharya (2012-Present), Bioinformatics & Computational Biology Ph.D.
3. Sarah Clark (2012-Present), Neuroscience Ph.D.
4. Ravi Das (2013-Present), Biosciences Ph.D.
5. Shatabdi Bhattacharjee (2013-Present), Biosciences Ph.D.

**CURRENT MASTERS STUDENTS**

1. Myurajan Rubaharan (2012-Present) – Accelerated BS/MS Biology
2. Kevin Armengol, M.S. Biology, (2012-Present)
3. Atit Patel, M.S. Biology, (2013-Present)
4. Lacey L. Graybeal (2011-2014), M.S. Biology, Neuroscience concentration

**FORMER DOCTORAL STUDENTS (WITH CURRENT AFFILIATIONS)**

1. Mikolaj J. Sulkowski, Ph.D. (2006-2010), Postdoctoral Fellow, National Institutes of Health
2. Valerie A. Buckley-Beason, Ph.D. (2006-2010), Biologist/Forensic Examiner, FBI
3. Esvar Prasad Ramachandran Iyer, Ph.D. (2007-May, 2012), Postdoctoral Fellow, George Mason Univ., Postdoctoral Fellow, Wyss Institute, Harvard University (June, 2013)
4. Vincent A. Hermoso, Ph.D. (2007-2012), Adjunct Faculty, Dept. of Biology, George Mason University
5. Srividya Chandramouli Iyer, Ph.D. (2008-2013), Postdoctoral Fellow, Cox Lab, Postdoctoral Fellow, Whitehead Institute, MIT (April, 2014)

**FORMER MASTERS STUDENTS (WITH CURRENT AFFILIATIONS)**

1. Erin J. Lind, M.S. Biology, (2005-2007), Faculty Res. Asst., College Veterinary Med., Oregon State Univ.
2. Aravinda Kuntimaddi, M.S. Biology (2006-2008), Ph.D. candidate, University of Virginia
3. Sarah A. Trunnell, M.S. Biology, (2008-2010), Ph.D. candidate, George Mason University
4. Jamin Letcher, M.S. Biology, (2008-2011), Asst. Professor, Northern VA Comm. College
5. Jaimin Patel, M.S. Bioinformatics & Computational Biology, (2011-2012), Novartis, Cambridge, MA
6. Farheen Shaikh, M.S. Biology, (2010-Jan. 2013), Research Technician, NY Genome Center
7. Lola Ulomi, M.S. Biology, (2012-2013), applying to Medical School
8. Brian Kang, M.S. Biology, (2012-2013), St. Louis School of Medicine, St. Louis, MO
9. Shruthi Sivakumar, M.S. Biology (2011-14), Research Staff, Biology Dept., GMU

**CURRENT AND FORMER UNDERGRADUATE RESEARCH ASSISTANTS (2006 – PRESENT)**

1. Christina McCray (2006-2008), Research Specialist, American Type Culture Collection
2. Jonathan Green (2006), Research Specialist, Covance Laboratories
3. Irene Fanous Kamel (2006), Clinical Research Specialist, Washington DC Veterans Affairs Medical Center
4. Riaz Shinwari (2008-2009), MS in Biomedical Sciences, VCU, Currently enrolled at VCU Medical School
5. Mathieu Kurosawa (2009-2011), Research Tech., Institute Pasteur, Paris, France (applying to medical school)
6. Myurajan Rubaharan (2009-2012), Currently enrolled in M.S. Biology, GMU
7. James Boddu (2009-2011), ER Scribe, INOVA Fairfax Hospital, accepted to George Washington Med School
8. Blaz Peck-Hanley (2009-2010), (PhD student at Georgetown University)
9. Maximillian Garland (2010-2011) (Entrepreneur, Bright Futura, [www.brightfutura.com](http://www.brightfutura.com))
10. Luis Sullivan (2010-2013), NIH Pre-doctoral IRTA, Laboratory of Dr. Chi-hon Lee, NICHD/NIH (2013-14); PhD student, Laboratory of Dr. Chris Doe, Institute of Neuroscience, University of Oregon (2014-Present)
11. Rahma Abdilleh (2010-2011), (BS Biology major, applying to graduate school in Speech Pathology)
12. Sean Saadat (2010-2011), (BS, Biology; early med school acceptance at George Washington University)
13. Shruti Kumbhar (2010-2011), (BS Biology major, applying to graduate school)
14. Vihitha Thota (2010-2014), (BS Biology major; VCU School of Medicine)
15. Shaurya Prakash (2010-2014), (BS Biology major); UVa School of Medicine
16. Kaitlin Grainger (2011-2012), (BS Biology major; applying to med school)
17. Lola Ulomi (2011-2012), BS Biology major; Currently enrolled in M.S. Biology, GMU
18. James Wiseman (2011-2012), BS Biology major; MS Forensics, GMU, Fall 2012
19. Yukting Lau (2010-2012) (BS Biology major)
20. Wahaj Choudhary (2011-2012) (BS Biology major)
21. Waleed Osman (2011-2012) (BS Neuroscience major), Research Tech, Laboratory of Dr. Albert Cardona, Janelia Farm Research Campus, HHMI

22. Francis Aguisanda (2011-2014) (BS Biology major), NIH Pre-doctoral IRTA, Lab of Dr. Ben White, NIMH
23. Puviharana Harendra (2011-2012) (BS Biology major, Med Tech, concentration)
24. Garrett Smith (2012-2013) (BS Biology major)
25. Hinduja Nallamalla (2012-2013) (BS Biology major)
26. Sara El-Ashaal (2012) (BS Biology major; applying to medical school)
27. Atit Patel (2012-2013) (BS Biology major; Research Semester student), M.S. Biology, George Mason Univ.
28. Shalini Boddu (2012-Present) (BS Biology major)
29. Caroline Thomas (2012-Present) (BS Biology major); early admission to George Washington Medical School
30. Hyun Sung (2013-2014) (BS Neuroscience major)
31. Katharine Dickson (2013) (BS Biology major, Research Semester student), applying to PhD programs
32. M. Jennifer Van (2013-Present) (BS Computer Science and Biology major)
33. Claire E. Johnson (2014) (BS Biology major)

#### **HIGH SCHOOL INTERNS (WITH CURRENT AFFILIATIONS)**

1. Kathleen Ferraren, Thomas Jefferson High School (2007), College of William and Mary
2. Arvind Thiagarajan, Thomas Jefferson High School (2007), MIT
3. Dennis Wang, Thomas Jefferson High School (2008-2010), Yale University
4. Madhu Karamsetty, Thomas Jefferson High School (2010-2011), Meyerhoff Scholar, UMBC
5. Rithvik Prasannappa, Thomas Jefferson High School (2010-2012), Washington University, St. Louis
6. Shalini Boddu, Ad Fontes Academy (2011), George Mason University
7. Suhas Gondi, Thomas Jefferson High School (2012-13), Moog Scholar, Washington Univ., St. Louis
8. Saniya Suri, Thomas Jefferson High School (2012), Washington Univ., St. Louis

#### **POST-GRADUATE TRAINEES**

1. Ramakrishna Meduri, M.S. Bioinformatics (2009-2012)

#### **FORMER POST-DOCTORAL FELLOWS (WITH CURRENT AFFILIATIONS)**

1. Srividya Chandramouli Iyer, Ph.D. (May 2013-April 2014), Whitehead Institute, MIT (Laboratory of Susan Lindquist, Ph.D., Apr. 2014-Present)
2. Esvar Prasad Ramachandran Iyer, Ph.D. (May 2012-May 2013), Harvard University (Laboratory of George Church, Ph.D., June 2013-Present)
3. Mikolaj J. Sulkowski, Ph.D. (2010), NICHD/NIH (Laboratory of Mihaela Serpe, Ph.D., Oct. 2010-Present)

#### **CURRENT DISSERTATION COMMITTEE MEMBER – DOCTORAL STUDENTS**

- |  |                |
|--|----------------|
| 1. Sarah Hawes (NEUR) – George Mason University      | 2012 – Present |
| 2. Moushimi Amaya (BIOS) – George Mason University   | 2013 – Present |
| 3. Kelly Hamilton (NEUR) – George Mason University   | 2013 – Present |
| 4. R. Logan Murphay (BIOS) – George Mason University | 2013 – Present |

#### **CURRENT THESIS COMMITTEE MEMBER – MASTERS STUDENTS**

- |  |                |
|--|----------------|
| 1. Huizhi Liang (BIOL)   | 2012 – Present |
| 2. Andrew Chay (BIOL)  | 2014 – Present |
| 3. Benjamin Matthew Williamson (James Madison Univ. – External member) | 2014 – Present |

#### **FORMER DISSERTATION COMMITTEE MEMBER – DOCTORAL STUDENTS**

- |   |             |
|---|-------------|
| 1. Theodor V. Jordan, Ph.D., Env. Science & Public Policy | 2004 – 2005 |
| 2. Alyson R. Yoder, Ph.D., Biodefense                     | 2005 – 2007 |
| 3. Dhritiman Vijay Mukherjee, Ph.D., Biosciences          | 2006 – 2009 |
| 4. Mohammed Jarrar, Ph.D., Biosciences                    | 2006 – 2007 |
| 5. Jeremy Kelly, Ph.D., Biosciences                       | 2006 – 2010 |
| 6. Margaret Emblom-Callahan, Ph.D., Biosciences           | 2006 – 2010 |

7. Mantej Chhina, Ph.D., Biosciences	2008 – 2010
8. Bridget McCloud, Ph.D., Biosciences	2006 – 2011
9. Laura Locklear, Ph.D., Biosciences	2006 – 2011
10. Weifeng Wang, Ph.D., Biosciences	2009 – 2012
11. Ramya Sundarajan, Ph.D., Biosciences	2006 – 2012
12. Nachiket Dharker, Ph.D., Biosciences	2006 – 2012
13. Robert Hallenberg, Ph.D., Biosciences	2008 – 2012
14. Yvette Connell-Albert, Ph.D., Biosciences	2006 – 2012
15. Rebekah Evans, Ph.D., Neuroscience	2008 – 2013
16. Emily Stoneham, Ph.D., Neuroscience	2010 – 2014
17. Jacob Nordman, Ph.D., Neuroscience	2010 – 2014
18. Dan Ehlinger, Ph.D., Cognitive & Behavioral Neuroscience	2012 – 2014
19. Irene Guendel, Ph.D., Biosciences	2012 – 2014
20. Erin Sanders, Ph.D., Neuroscience	2008 – 2014

**FORMER THESIS COMMITTEE MEMBER – MASTERS STUDENTS**

1. Lance Batchlor, M.S. (BIOL)	2006 – 2008
2. Stephanie Pylypko, M.S. (BIOL)	2006 – 2007
3. Holly Antony, M.S. (BIOL)	2007 – 2009
4. Jessica Keating, M.S. (BIOL)	2007 – 2009
5. Amanda Zirzow, M.S. (BIOL)	2009 – 2010
6. Thuy Phuong T. Tran, M.S. (BIOL)	2011 – 2013
7. Steve St. John, M.S. (BIOL)	2012 – 2013
8. Tim Kim (BIOL)	2013 – 2014
9. P. Lorenzo Bozzelli (PSYC)	2013 – 2014

**SELECTED HONORS AND AWARDS FOR GRADUATE/UNDERGRADUATE/HIGH SCHOOL STUDENTS**

- Mariann and Bruce Johnson Award: Shaurya Prakash and Vihitha Thota (2014)
- Senior Award Biology Department: Francis Aguisanda (2014)
- OSCAR Student Excellence Award: Francis Aguisanda (2014)
- College of Science Undergraduate Research Colloquium (2014): Jennifer Van (1<sup>st</sup> Place); Caroline Thomas (2<sup>nd</sup> Place) awards, University-wide.
- Spring 2014 URSP Travel Awards: Francis Aguisanda, Caroline Thomas
- NIH Intramural Research Training Award (IRTA): Francis Aguisanda (2014-2015)
- Moog Scholarship, Washington University St. Louis: Suhas Gondi (2013)
- 4<sup>th</sup> Place at ISEF in Cellular and Molecular Biology: Suhas Gondi (2013). International competition.
- OSCAR Student Excellence Award: Luis Sullivan (2013)
- Senior Award, Undergraduate Program in Biology: Atit Patel (2013)
- School of Systems Biology Impact Award: Srividya Chandramouli Iyer (2013)
- NIH Intramural Research Training Award (IRTA): Luis Sullivan (2013-2014)
- “Best Poster” at 2013 Central Virginia Chapter of the Society for Neuroscience meeting: Francis Aguisanda
- (14) Undergraduate Research Scholars Program (URSP) Award Winners (2009-2014): Riaz Shinwari, Myurajan Rubaharan, Luis Sullivan, James Boddu, Waleed Osman, Mathieu Kurosawa, Maximillian Garland, Vihitha Thota, Shaurya Prakash, Francis Aguisanda, Atit Patel; Caroline Thomas; Minh Jennifer Van; Hyun Sung (**each at \$1,500**) (note: selected students received multiple awards).
- Spring 2013 URSP Travel Award: Francis Aguisanda
- Fall 2011 URSP Travel Awards: Waleed Osman, Myurajan Rubaharan, Luis Sullivan
- Spring 2012 URSP Travel Awards: Myurajan Rubaharan, Luis Sullivan
- AY '11-'12 OSCAR Fellows: Myurajan Rubaharan, Luis Sullivan



- AY '12-'13 OSCAR Fellows: Luis Sullivan (UG); Myurajan Rubaharan (Grad)
- AY '13-'14 OSCAR Fellows: Francis Aguisanda (UG); Myurajan Rubaharan (Grad)
- AY '14-'15 OSCAR Fellow: Caroline Thomas (UG)
- 2011 College of Science Keynote Speaker, Undergraduate Research Colloquium: M. Rubaharan
- 2012 College of Science Keynote Speaker, Undergraduate Research Colloquium: L. Sullivan
- 2011 Sigma Xi Grant-in-Aid-of-Research Award: Myurajan Rubaharan
- "Best Poster in Category Award" at National *Sigma Xi* Research Meeting: Myurajan Rubaharan
- Faculty Award for Outstanding UG Research: (2012) Myurajan Rubaharan
- OSCAR – Full-time Summer Research Fellowship: (2012) Luis Sullivan (**\$5,000 award**)
- Competitive Research Semester Grant Award: (2012) Atit Patel (**\$3,000 award**)
- Competitive Research Semester Grant Award: (2013) Katharine Dickson (**\$3,000 award**)
- Outstanding Graduate Student Research Award: Eswar Iyer, Ph.D. (2012)
- Outstanding Graduate Student Teaching Award: Eswar Iyer, Ph.D. (2012)
- Osher Lifetime Learning Institute Scholarship: Eswar Iyer, Ph.D. (2012)
- School of Systems Biology Impact Award: Srividya Chandramouli Iyer (2012)
- (2) Doctoral Dissertation Completion Grants: Vincent Hermoso (2011); Srividya C. Iyer (2012)
- (4) Intel Science Talent Search and Siemens Competition National Semi-Finalists: (2009-2012): Dennis Wang, Madhu Karamsetty, Rithvik Prasannappa, Suhas Gondi

#### EXTERNAL COLLABORATORS

1. Michael J. Galko, Ph.D., University of Texas, MD Anderson Cancer Center
2. Eric C. Lai, Ph.D., Memorial Sloan-Kettering, NY
3. Daniel Kalderon, Ph.D., Columbia University
4. Judith Kassis, Ph.D., NICHD/NIH
5. Chi-Hon Lee, M.D., Ph.D., NICHD/NIH
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#### INTERNAL COLLABORATORS (GEORGE MASON UNIVERSITY)

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#### PATENTS

1. Iyer, E.P.R., **Cox, D.N.** and George Mason University. Tissue Sample Preprocessing Methods and Devices. U.S. Patent No. 8,062,861 B2. Patent Cooperation Treaty Patent Application Number PTC/US2009/34608.

This device has been contracted for distribution by KeraFAST. Negotiations in place in license this technology to Electron Microscopy Sciences (EMS), Hatfield, PA.

#### COPYRIGHTS

- **Cox, D.N.** (1999). Function of the *Drosophila piwi* gene in the self-renewing division of germline stem cells and in germline development. Ph.D. Dissertation, Duke University, Durham, NC.

**RESEARCH PUBLICATIONS: (UNDERGRADUATE CO-AUTHORS) (>1,600 CITATIONS).**

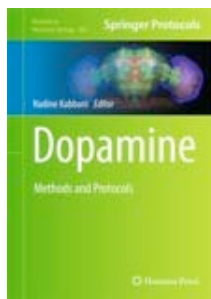
1. Graybeal, J.J., Bozzelli, P.L., Graybeal, L.L., McKnight, P.E., **Cox, D.N.**, and Flinn, J.M. (2014). Human ApoE  $\epsilon 4$  alters circadian rhythm activity, IL-1 $\beta$  and GFAP in CRND8 mice. *J. Alzheimers Dis.* (Epub ahead of print). doi: 10.3233/JAD-132009. **5-year impact factor: 4.39**
2. Iyer S. C., Iyer E. P. R., Meduri R., **Rubaharan, M.**, Kuntimaddi, A., **Karamsetty M.**, and **Cox D. N.** (2013). Cut via CrebA transcriptionally regulates the COPII secretory pathway to direct dendrite development in *Drosophila*. *J. Cell Sci.* **126(20)**:4732-45. **5-year impact factor: 6.40**
3. Iyer E.P.R., Iyer S.C., **Sullivan L.**, **Wang D.**, Meduri, R., Graybeal L.L, and **Cox D.N.** (2013). Functional genomic analyses of two morphologically distinct classes of *Drosophila* sensory neurons: Post-mitotic roles of transcription factors in dendritic patterning. *PLoS ONE* **8(8)**: e72434. doi:10.1371/journal.pone.0072434. **5-year impact factor: 4.610**. Acknowledgements: **M. Garland, M. Karamsetty**
4. Sanders, E.M., **Nguyen, M.**, **Zhou, K.**, **Hanks, M.**, **Yusuf, K.**, **Cox, D.N.** and Dumas, T. (2013). Developmental modification of synaptic NMDAR composition and maturation of glutamatergic synapses: Matching postsynaptic slots with receptor pegs. *Biol. Bull.* **224**:1-13. **5-year impact factor: 2.475**
5. Iyer, S.C., Wang, D., Iyer, E.P.R., Trunnell, S.A., Meduri, R., **Shinwari, R.**, Sulkowski, M.J., and **Cox, D.N.** (2012). The RhoGEF Trio functions in sculpting class specific dendrite morphogenesis in *Drosophila* sensory neurons. *PLoS ONE* **7(3)**: e33634. doi:10.1371/journal.pone.0033634. **(952 accessions) 5-year impact factor: 4.610**. Acknowledgements: **V. Thota, S. Prakash, W. Choudhry, Y. Lau.**
6. Sulkowski, M.J., **Kurosawa, M.S.**, and **Cox, D.N.** (2011). Growing pains: Development of the nocifensive response in *Drosophila* larvae. *Biol. Bull.* **221**:300-306. *(This manuscript was selected as the cover art for this issue)*. **5-year impact factor: 2.475**
7. Sulkowski, M.J., Iyer, S.C., **Kurosawa, M.S.**, Iyer, E.P.R., and **Cox, D.N.** (2011) Turtle functions downstream of Cut in differentially regulating class specific dendrite morphogenesis in *Drosophila*. *PLoS ONE* **6(7)**: e22611. doi:10.1371/journal.pone.0022611. **5-year impact factor: 4.610**. Acknowledgements: **L. Sullivan, M. Rubaharan, M. Garland.**
8. Iyer, E.P.R. and **Cox, D.N.** (2010). Laser capture microdissection of *Drosophila* peripheral neurons. *J. Vis. Exp.* **39**, <http://www.jove.com/index/details.stp?id=2016>, doi: 10.3791/2016.
9. Emblom-Callahan, M.C., Chhina, M.K., Shlobin, O.A., Ahmad, S., **Reese, E.S.**, Iyer, E.P., **Cox, D.N.**, Brenner, R., Burton, N.A., Grant, G.M. and Nathan, S.D. (2010). Genomic phenotype of non-cultured pulmonary fibroblasts in Idiopathic Pulmonary Fibrosis. *Genomics* **96**:134-145. **5-year impact factor: 3.214**
10. Iyer, E.P.R., Iyer, S.C., Sulkowski, M.J. and **Cox, D.N.** (2009). Isolation and purification of *Drosophila* peripheral neurons by magnetic bead sorting. *J. Vis. Exp.* **34**, <http://www.jove.com/index/details.stp?id=1599>, doi: 10.3791/1599.
11. Kuntimaddi, A., Sulkowski, M.J. and **Cox, D.N.** (2007). An organizational strategy for deficiency mapping: A computational approach. *Dros. Inf. Serv.* **90**: 158-162.
12. Megosh, H.\*, **Cox, D.N.\***, Campbell, C., and Lin, H. (2006). The role of PIWI and the miRNA machinery in *Drosophila* germline determination. *Curr. Biol.* **16**, 1-11. (\*) These authors contributed equally to this work. **5-year impact factor: 11.436**
13. Szakmary, A.\*, **Cox, D.N.\***, Wang, Z., and Lin, H. (2005). Regulatory relationship between *piwi*, *pumilio* and *bag-of-marbles* in *Drosophila* germline stem cell self-renewal and differentiation. *Curr. Biol.* **15**, 171-178. (\*) These authors contributed equally to this work. **5-year impact factor: 11.436**
14. Shi, S.-H., **Cox, D.N.**, Wang, D., Jan, L.Y. and Jan, Y.-N. (2004). Control of dendrite arborization by an Ig family member, dendrite arborization and synapse maturation 1 (Dasm1). *Proc. Natl. Acad. Sci. USA* **101**, 13341-13345. *(This manuscript was selected as the cover art for this issue)*. **5-year impact factor: 10.591**

15. Abdelilah-Seyfried, S., **Cox, D.N.**, Jan, L.Y. and Jan, Y.-N. (2003). Bazooka is a permissive factor for the invasive behavior of *discs large* tumor cells in *Drosophila* ovarian follicular epithelia. *Development* **130**, 1927-1935. **5-year impact factor: 7.476**
16. **Cox, D.N.**, Abdelilah-Seyfried, S., Jan, L.Y. and Jan, Y.-N. (2001). Bazooka and atypical protein kinase C are required to regulate oocyte differentiation in the *Drosophila* ovary. *Proc. Natl. Acad. Sci. U.S.A.* **98**, 14475-14480. **5-year impact factor: 10.591**
17. **Cox, D.N.**, Lu, B., Sun, T.Q., Williams, L.T. and Jan, Y.-N. (2001). *Drosophila par-1* is required for oocyte differentiation and microtubule organization. *Curr. Biol.* **11**, 75-87. (**This manuscript was selected as the cover art for this issue**). **5-year impact factor: 11.436**
18. King, F.J., Szakmary, A., **Cox, D.N.** and Lin, H. (2001). Yb modulates the divisions of both germline and somatic stem cells through *piwi*- and *hh*-mediated mechanisms in the *Drosophila* ovary. *Mol. Cell* **7**, 497-508. **5-year impact factor: 14.447**
19. **Cox, D.N.**, Chao, A., and Lin, H. (2000). *piwi* encodes a nucleoplasmic factor whose activity modulates the number and division rate of germline stem cells. *Development* **127**, 503-514. **5-year impact factor: 7.476**
20. **Cox, D.N.**, Chao, A., Baker, J., Chang, L., Qiao, D., and Lin, H. (1998). A novel class of evolutionarily conserved genes defined by *piwi* are essential for stem cell self-renewal. *Genes Dev.* **12**, 3715-3727. **5-year impact factor: 13.892**
21. **Cox, D.N.** and Muday, G.K. (1994). NPA binding activity is peripheral to the plasma membrane and is associated with the cytoskeleton. *The Plant Cell* **6**, 1941-1953. **5-year impact factor: 10.648**
22. **Cox, D.N.** and Allen, N.S. (1993). Early ionic response of alfalfa root hairs to nodulation factors. *Coll. Acad. North Carolina Acad. Sci.* **39**, 1-13.

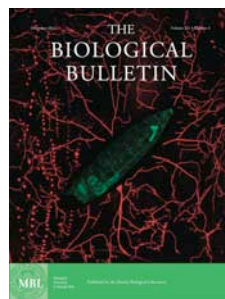
#### BOOK CHAPTERS

1. Iyer, E.P.R., Iyer, S.C. and **Cox, D.N.** (2013). Application of cell-specific isolation to the study of dopamine signaling in *Drosophila*. *Methods Mol. Biol.* **964**:215-25. (**Article image selected for book cover art**).
2. Letcher, J.M. and **Cox, D.N.** (2012). Adult neural stem cells: isolation and propagation. *Methods Mol. Biol.* **823**:279-293.
3. Allen, N.S., Bennett, M.N., **Cox, D.N.**, Shipley, A., Ehrhardt, D.W., and Long, S.R. (1994). Effects of Nod factors on alfalfa root hair  $Ca^{2+}$  and  $H^{+}$  currents and on cytoskeletal behaviour. In *Adv. in Mol. Gen. of Plant-Microbe Interactions* **3**, 107-113. M.J. Daniels, J.A. Downie, and A.E. Osbourn (eds.), Kluwer Academic, Netherlands.

#### FEATURED COVER ART



Iyer et al. (2013). *Methods in Mol. Biol.* **964**:215-25



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Shi et al. (2004). *Proc. Natl. Acad. Sci. USA* **101**:13341-13345



Cox et al. (2001). *Curr. Biol.* **11**:75-87

**DOCTORAL DISSERTATION**

Daniel N. Cox, Ph.D., Duke University (1999). Function of the *Drosophila piwi* gene in the self-renewing division of germline stem cells and in germline development.

**SELECTED INVITED SEMINARS**

1. **Cox, D.N.** (2014). Systems neuroscience driven exploration of dendrite development and nociceptive behavior. Dept. of Biology, University of New England, Biddeford, ME.
2. **Cox, D.N.** (2014). “The Why of the Fly”. TEDx Conference, George Mason University.
3. **Cox, D.N.** (2013). Systems neuroscience driven exploration of dendrite development and behavior. Neuroscience Institute, Georgia State University, Atlanta, GA.
4. **Cox, D.N.** (2013). Systems neuroscience driven exploration of dendrite development and behavior. Dept. of Biology, James Madison University, Harrisonburg, VA.
5. **Cox, D.N.** (2013). Systems neuroscience driven exploration of dendrite morphogenesis and behavior. National Institutes of Health, Bethesda, MD.
6. **Cox, D.N.** (2013). Systems neuroscience driven exploration of dendrite morphogenesis and behavior. Dept. of Biological Sciences, Southern Methodist University, Dallas, TX.
7. **Cox, D.N.** (2013). Systems neuroscience approaches to dendritic development and behavior through high-throughput assays and neuromorphometry. Digital Reconstruction of Neuronal Morphology: Recognizing the Breakthroughs Conference. Sponsored by the Burroughs Wellcome Fund.
8. **Cox, D.N.** (2013). Elucidating cellular and molecular mechanisms governing dendrite development and behavior. Wake Forest University, Winston-Salem, NC.
9. **Cox, D.N.** (2012). Neurogenetic dissection of dendrite morphogenesis and behavior. George Mason University College of Science STEM Accelerator & Biology Undergraduate Program.
10. **Cox, D.N.** (2010). Complex transcriptional regulatory networks direct distinct aspects of dendrite arborization and receptive field specification in *Drosophila*. National Institutes of Health, Bethesda, MD.
11. **Cox, D.N.** (2010). Cell intrinsic mechanisms mediating class specific dendrite morphogenesis. Dept. of Molecular and Microbiology, George Mason University, Manassas, VA.
12. **Cox, D.N.** (2008). Molecular mechanisms governing class specific dendrite morphogenesis. University of Richmond, Richmond, VA.
13. **Cox, D.N.** (2007). Molecular mechanisms governing class specific dendrite morphogenesis. James Madison University, Harrisonburg, VA.
14. **Cox, D.N.** (2007). Molecular mechanisms governing class specific dendrite morphogenesis. Krasnow Institute for Advanced Study, George Mason University, Fairfax, VA.
15. **Cox, D.N.** (2003). Elucidating the molecular mechanisms underlying the acquisition of class specific dendritic morphologies. University of South Florida, Tampa, FL.
16. **Cox, D.N.** (2003). Novel immunoglobulin superfamily members direct distinct aspects of *Drosophila* dendrite morphogenesis. George Mason University, Manassas, VA.
17. **Cox, D.N.**, Jan, L.Y. and Jan, Y.-N. (2002). The IgSF molecules, *turtle* and *arbor defective*, mediate distinct aspects of multidendritic neuron dendrite development. The Jane Coffin Childs Memorial Research Fund for Medical Research Fellows Meeting, Lakeville, CT.
18. **Cox, D.N.** and Jan, Y.-N. (2001). Molecular mechanisms governing dendritic morphogenesis in the *Drosophila* peripheral nervous system. The Jane Coffin Childs Memorial Research Fund for Medical Research Fellows Meeting, Lakeville, CT.
19. **Cox, D.N.** and Lin, H. (2000). Function of the *Drosophila piwi* gene in the self-renewing division of germline stem cells and in germline development. Harold M. Weintraub Symposium, Fred Hutchinson Cancer Research Center, Seattle, WA.
20. **Cox, D.N.** and Lin, H. (2000). *piwi* and *bag-of-marbles* function antagonistically in regulating the germline stem cell to cystoblast transition during *Drosophila* oogenesis. The 41<sup>st</sup> Annual *Drosophila* Research Conference, Pittsburgh, PA.

21. **Cox, D.N.** and Lin, H. (2000). PIWI is a pole plasm component required for pole cell formation, germ cell migration and the maintenance of germline transcriptional quiescence. The 41<sup>st</sup> Annual *Drosophila* Research Conference, Pittsburgh, PA.
22. **Cox, D.N.**, Chao, A. and Lin, H. (1999). PIWI is a novel nucleocytoplasmic protein essential for germline stem cell self-renewal. The 40<sup>th</sup> Annual *Drosophila* Research Conference, Bellevue, WA.
23. **Cox, D.N.**, Chao, A., Deng, W., Baker, J. and Lin, H. (1998). *piwi*, a novel class of genes required for germline stem cell maintenance in diverse organisms. The 39<sup>th</sup> Annual *Drosophila* Research Conference, Washington, D.C.
24. Muday, G.K. and **Cox, D.N.** (1994). Association of the Naphthylphthalamic Acid (NPA) binding protein with the actin cytoskeleton. Gordon Research Conference, Hanover, NH.

**SELECTED PUBLISHED ABSTRACTS AND PRESENTATIONS (UNDERGRADUATE CO-AUTHORS)**

1. Ascoli, G.A. and Cox, D.N. (2014). Cytoskeletal mechanisms of dendrite arbor shape development. *CRCNS PI Meeting*, Tempe, AZ. (**Platform Oral Presentation**).
2. Turner, H.N., Armengol, K., Iyer, S.C., Sullivan, L., Iyer, E.P.R., Landry, C., Cox, D.N. and Galko, M.J. (2014). Dissection of genetic and molecular bases of noxious cold detection using *Drosophila* larvae. *Society for Neuroscience*, Washington, DC. *Nanosymposium*. (**Platform Oral Presentation**).
3. Nanda, S., Armananzas, R., Parekh, R., Polavaram, S., Cox, D.N. and Ascoli, G.A. (2014). Comparing stochastic growth models to explore the developmental mechanisms of dendritic arbors. *Society for Neuroscience*, Washington, DC.
4. Graybeal, L.L., Iyer, S.C., Iyer, E.P.R., **Thomas, C.**, Rubaharan, M., Cox, D.N. (2014). Dissecting the role of autophagy in mediating sensory neuron dendrite homeostasis. 55<sup>th</sup> Annual *Drosophila* Research Conference, March 26-30, San Diego, CA.
5. Clark, S.G., Rubaharan, M., **Van, M.J.**, Iyer, S.C., and Cox, D.N. (2014). Nejiire/CBP regulates dendritic complexity by modulating the localization of Dar1. 55<sup>th</sup> Annual *Drosophila* Research Conference, March 26-30, San Diego, CA.
6. Armengol, K., Turner, H., Iyer, S.C., **Sullivan, L.**, Iyer, E.P.R., Landry, C., Galko, M.J. and Cox, D.N. (2014). Genetic and molecular bases of noxious cold detection in *Drosophila* larvae. 55<sup>th</sup> Annual *Drosophila* Research Conference, March 26-30, San Diego, CA. (**Platform Oral Presentation**).
7. **Aguisanda, F.**, Iyer, S.C., Sivakumar, S., Rubaharan, M., Patel, A., **Gondi, S.**, Iyer, E.P.R., Bortolamiol-Becet, D., Lai, E.C., and Cox, D.N. (2014). miRNome functional analyses reveal complex miRNA-mediated regulatory effects on class-specific dendritic architecture. National Conference on Undergraduate Research (NCUR), April 3-5, University of Kentucky.
8. **Thomas, C.**, Graybeal, L.L., Iyer, E.P.R., Iyer, S.C., Rubaharan, M., and Cox, D.N. (2014). Dissecting the role of autophagy in mediating dendrite development in *Drosophila*. National Conference on Undergraduate Research (NCUR), April 3-5, University of Kentucky.
9. Bozzelli, P.L., Graybeal, J.J., Graybeal, L.L., Cox, D.N., and Flinn, J.M. (2013). IL-1 $\beta$  mRNA expression, circadian rhythms, and nest building in a hAPP/ApoE  $\epsilon$ 4 late-onset mouse model of Alzheimer's disease. *Society for Neuroscience*, San Diego: Poster 238.03.
10. Iyer, E.P.R., Iyer, S.C., **Sullivan, L.**, Rubaharan, M., **Prakash, S.**, **Thota, V.**, **Lau, Y.**, Das, R., Shaikh, F. and Cox, D.N. (2013). The novel Zn-BED transcription factor, *bedwarfed*, is essential for dendritic growth and scaling. Cold Spring Harbor Laboratory, Neurobiology of *Drosophila* Meeting.
11. Iyer, S.C., Rubaharan, M., Sivakumar, S., Meduri, R., **Aguisanda, F.**, **Gondi, S.**, **Patel, A.**, Iyer, E.P.R., Lai, E.C. and Cox, D.N. (2013). miRNome analyses reveal K box miRNAs function in mediating class-specific dendrite homeostasis. Cold Spring Harbor Laboratory, Neurobiology of *Drosophila* Meeting.
12. Turner, H., Iyer, S.C., Sullivan, L., Armengol, K., Iyer, E.P.R., Landry, C., Cox, D.N. and Galko, M.J. (2013). Genetic and molecular bases of noxious cold detection in *Drosophila* larvae. Cold Spring Harbor Laboratory, Neurobiology of *Drosophila* Meeting. (**Platform Oral Presentation**).

13. **Aguisanda, F.**, Iyer, S.C., Sivakumar, S., Rubaharan, M., **Gondi, S., Patel, A.**, Iyer, E.P.R., Meduri, R., Bortolamiol-Becet, D., Lai, E.C. and Cox, D.N. (2013). miRNome functional analyses reveal miRNA-mediated regulation of class-specific dendrite morphogenesis. Central Virginia Chapter of Society for Neuroscience (CVCSN), VTCRI, Roanoke, VA. (**Awarded best poster**).
14. Graybeal, L., Iyer, S.C., Choudhry, W., Rubaharan, M., Iyer, E.P.R., Clark, S., and Cox, D.N. (2013). Dissecting the role of homeodomain and Hox transcription factors in mediating dendrite development in *Drosophila*. Central Virginia Chapter of Society for Neuroscience (CVCSN), VTCRI, Roanoke, VA.
15. **Sullivan, L.**, Iyer, S.C., Armengol, K., Iyer, E.P.R. and Cox, D.N. Investigating the cellular bases of cold nociception in *Drosophila* larvae. Presented at the 54<sup>th</sup> Annual Drosophila Research Conference. April 3-7, 2013, Washington, DC.
16. Iyer, E.P.R., Iyer, S.C., **Sullivan, L., Lau, Y., Prakash, S., Thota, V.**, Shaikh, F. and Cox, D.N. The novel Zinc-BED transcription factor, *bedwarfed*, is essential for dendritic growth and scaling. Presented at the 54<sup>th</sup> Annual Drosophila Research Conference. April 3-7, 2013, Washington, DC.
17. Rubaharan, M., Iyer, S.C., Iyer, E.P.R. and Cox, D.N. Nejiire, a CBP/p300 family transcription factor, regulates dendritic development by modulating the localization of the Krüppel-like transcription factor Dar1 in *Drosophila* da neurons. Presented at the 54<sup>th</sup> Annual Drosophila Research Conference. April 3-7, 2013, Washington, DC.
18. Iyer, S.C., Rubaharan, M., Meduri, R., Sivakumar, S., **Aguisanda, F., Gondi, S., Patel, A.**, Iyer, E.P.R., Bortolamiol-Becet, D., Lai, E.C. and Cox, D.N. miRNome analyses reveal K box miRNAs function in mediating class specific dendrite morphogenesis. Presented at the 54<sup>th</sup> Annual Drosophila Research Conference. April 3-7, 2013, Washington, DC. (**Platform Oral Presentation**)
19. **Thota, V., Prakash, S., Sullivan, L., Lau, Y., Garland, M.**, Iyer, S.C., Iyer, E.P.R. and Cox, D.N. (2012). Exploring the role of a novel zinc-BED domain containing transcription factor in mediating cytoskeletal architecture during dendrite morphogenesis. Second Annual College of Science Undergraduate Research Colloquium, George Mason University.
20. **Harendra, P.**, Iyer, S.C., Iyer, E.P.R., Marr, J. and Cox, D.N. (2012). Automated quantification of larval response to noxious sensory perception. Second Annual College of Science Undergraduate Research Colloquium, George Mason University.
21. **Choudhry, W.**, Iyer, S.C., Iyer, E.P.R., Meduri, R., and Cox, D.N. (2012). Dissecting the role of homeodomain and Hox transcription factors in mediating dendrite development in *Drosophila*. Second Annual College of Science Undergraduate Research Colloquium, George Mason University. (Awarded best poster).
22. **Sullivan L.**, Iyer, E.P.R., Iyer, S.C., **Karamsetty, M., Rubaharan, M., Garland, M.**, and D. N. Cox. (2011). A genetic suppressor screen identifies downstream effectors mediating *Cut* transcriptional regulation of dendrite morphogenesis. Virginia Academy of Sciences 89<sup>th</sup> Annual meeting, University of Richmond, Richmond, VA.
23. Iyer, S. C., Iyer, E.P.R., Meduri, R., Karamsetty, M., **Rubaharan, M.** and Cox, D. N. (2011). Transcriptional regulation of COPII mediated secretory pathway directs class specific dendrite morphogenesis. Presented at the 52<sup>nd</sup> Annual Drosophila Research Conference, March 31-April 4 2011, at the Town and Country Resort and Conference Centre, San Diego, CA.
24. Eswar P. R. Iyer, Srividya C. Iyer, **Madhu Karamsetty** and Daniel N. Cox. Identification and Characterization of Downstream Effectors Mediating Cut Transcriptional Regulation of Class-Specific Dendrite Morphogenesis via Global Functional Genomic Analyses. Presented at the 52<sup>nd</sup> Annual Drosophila Research Conference, March 31-April 4 2011, at the Town and Country Resort and Conference Centre, San Diego, CA.
25. Iyer, S. C., Iyer, E.P.R., Meduri, R., **Karamsetty, M., Rubaharan, M.** and Cox, D. N. (2011). Transcriptional regulation of COPII mediated secretory pathway directs class specific dendrite morphogenesis. Virginia Academy of Sciences 89<sup>th</sup> Annual meeting, University of Richmond, Richmond, VA.

26. Iyer, E.P.R., Iyer, S.C., **Sullivan, L.**, **Karamsetty, M.**, **Rubaharan, M.**, **Garland, M.**, and Cox, D. N. (2011). Dissecting *Cut*-mediated transcriptional networks regulating class specific dendritic architecture. Virginia Academy of Sciences 89<sup>th</sup> Annual meeting, University of Richmond, Richmond, VA.
27. **Sullivan, L.**, Iyer, E.P.R. and Cox, D.N. Characterization of Downstream Effectors Mediating *Cut* Transcriptional Regulation of Class-Specific Dendrite Morphogenesis via Global Functional Genomic Analyses.  
Presented at: 1. *Sigma Xi* Annual Meeting and International Research Conference, Raleigh, NC (2011); 2. Colonial Academic Alliance Undergraduate Research Conference, Old Dominion University, Norfolk, VA (2012); 3. First Annual College of Science Undergraduate Research Colloquium, George Mason University (2011); 4. Virginia Academy of Sciences 90<sup>th</sup> Annual Meeting, University of Richmond, Richmond, VA (2011); 5. National Conference on Undergraduate Research (NCUR) Meeting, Weber State University, Ogden, UT (2012); 6. Central Virginia Chapter of the Society for Neuroscience Annual Symposium, VCU, Richmond, VA (2012). 7. Colonial Academic Alliance Undergraduate Research Meeting, Norfolk State Univ., Norfolk, VA (2012). 8. University-wide Celebration of Student Scholarship, GMU (2012).
28. **Rubaharan, M.**, Iyer, S.C., Iyer, E.P.R., and Cox, D.N. Characterization of *Dar1* interacting proteins essential for differential cellular localization and regulation of class-specific dendrite development.  
Presented at: 1. *Sigma Xi* Annual Meeting and International Research Conference, Raleigh, NC (2011); 2. Colonial Academic Alliance Undergraduate Research Conference, Old Dominion University, Norfolk, VA (2012); 3. Second Annual College of Science Undergraduate Research Colloquium, George Mason University (2012); 4. National Conference on Undergraduate Research Meeting, Weber State University, Ogden, UT (2012); 5. Central Virginia Chapter of the Society for Neuroscience Annual Symposium, VCU, Richmond, VA (2012). 6. Colonial Academic Alliance Undergraduate Research Meeting, Norfolk State Univ., Norfolk, VA (2012). 7. College of Science Undergraduate Research Colloquium, GMU (2012). 8. University-wide Celebration of Student Scholarship, GMU (2012).
29. **Rubaharan, M.**, Iyer, E.P.R., and Cox, D.N. Investigating the role of RNAi Regulation in Class-Specific Dendrite Morphogenesis.  
Presented at: 1. *Sigma Xi* Annual Meeting and International Research Conference, Raleigh, NC (2010); 2. Colonial Academic Alliance Undergraduate Research Conference, Hofstra University, New York, NY (2010); 3. Keynote speaker at the First Annual College of Science Undergraduate Research Colloquium, George Mason University (2011); 4. Virginia Academy of Sciences 89<sup>th</sup> Annual Meeting, Richmond, VA (2010); 5. Bioinformatics and Computational Biology Graduate Student Research Day, George Mason University (2010).
30. **Osman, W.**, Iyer, S.C. and **Cox, D.N.** (2011). Class specific dendrite morphology is alternately affected by induced hyperexcitability and suppression of neuronal activity in *Drosophila* da neurons. *Sigma Xi* Annual Meeting, Raleigh, NC.
31. Zirzow, A.C., **Cox, D.N.**, Love, D.C. and Hanover, J.A. (2010). O-GlcNAc modification and circadian rhythm in *Drosophila melanogaster*. NIH Summer Internship Program.
32. **Kurosawa, M.S.**, Sulkowski, M.J. and **Cox, D.N.** (2010). Investigating the development of nocifensive response in *Drosophila* larvae via optogenetics and thermosensation. *Sigma Xi* Annual Meeting, Raleigh, NC.
33. **Rubaharan, M.**, Iyer, E.P.R. and **Cox, D.N.** (2010). The RNAi machinery is essential in the specification of class specific da neuron dendrite morphogenesis. *Sigma Xi* Annual Meeting, Raleigh, NC.
34. **Garland, M.**, Iyer, E.P.R. and **Cox, D.N.** (2010). Complex transcriptional regulatory networks govern dendritic arborization in *Drosophila*. *Sigma Xi* Annual Meeting, Raleigh, NC.
35. **Boddu, J.**, Trunnell, S.A., and **Cox, D.N.** (2010). The *Drosophila* spectraplakins, Short stop, differentially regulates da neuron dendrite morphogenesis. *Sigma Xi* Annual Meeting, Raleigh, NC.

36. **Karamsetty, M.**, Iyer, E.P.R., and **Cox, D.N.** (2010). Characterization of downstream effectors mediating *cut* transcriptional regulation of class-specific dendrite morphogenesis. Aspiring Scientists Summer Internship Program (ASSIP), George Mason University, Manassas, VA.
37. **Prasannappa, R.**, Iyer, E.P.R. and **Cox, D.N.** (2010). Investigating *wingless*-mediated signaling in class specific dendrite morphogenesis. Aspiring Scientists Summer Internship Program (ASSIP), George Mason University, Manassas, VA.
38. Sulkowski, M.J., **Kurosawa, M.S.**, Iyer, S.C., Iyer, E.P.R., and **Cox, D.N.** (2010). Turtle, a conserved Ig Superfamily member, differentially regulates class specific dendrite morphogenesis in *Drosophila*. Mid-Atlantic Society for Developmental Biology, Johns Hopkins Univ., Baltimore, MD.
39. Iyer, E.P.R., Iyer, S.C., **Wang, D.**, and **Cox, D.N.** (2010). Functional Genomic Analyses of Transcriptional Regulation Mediating Class-Specific Neuron Dendrite Morphogenesis. Mid-Atlantic Society for Developmental Biology, Johns Hopkins Univ., Baltimore, MD.
40. Iyer, S.C., Kuntimaddi, A. and **Cox, D.N.** (2010). The COPII Coat Protein Sec31 Regulates da Neuron Dendrite Morphogenesis. Mid-Atlantic Society for Developmental Biology, Johns Hopkins Univ., Baltimore, MD.
41. Iyer, E.P.R., Iyer, S.C., **Wang, D.**, and **Cox, D.N.** (2010). Functional Genomic Analyses of Transcriptional Regulation Mediating Class-Specific Neuron Dendrite Morphogenesis. 88<sup>th</sup> Annual Meeting of the Virginia Academy of Sciences, James Madison Univ., Harrisonburg, VA. (Awarded Best Oral Presentation in Session)
42. Iyer, S.C., Kuntimaddi, A. and **Cox, D.N.** (2010). The COPII Coat Protein Sec31 Regulates da Neuron Dendrite Morphogenesis. 88<sup>th</sup> Annual Meeting of the Virginia Academy of Sciences, James Madison Univ., Harrisonburg, VA. (Awarded Best Oral Presentation in Session)
43. Iyer, E.P.R., Iyer, S.C., **Wang, D.**, and **Cox, D.N.** (2010). Functional Genomic Analyses of Transcriptional Regulation Mediating Class IV da Neuron Dendrite Morphogenesis. Virginia Council of Graduate Schools, 4<sup>th</sup> Annual Graduate Research Forum, Richmond, VA.
44. **Shinwari, R.**, **Wang, D.**, Iyer, E.P.R., Iyer, S.C., and **Cox, D.N.** (2010). The *Drosophila* RhoGEF, Trio, Mediates Class-Specific Dendrite Morphogenesis via Differential Regulation of the Actin Cytoskeleton. The 51<sup>st</sup> Annual *Drosophila* Research Conference, Washington, DC
45. Iyer, S.C., Kuntimaddi, A. and **Cox, D.N.** (2010). The COPII Coat Protein Sec31 Regulates da Neuron Dendrite Morphogenesis. The 51<sup>st</sup> Annual *Drosophila* Research Conference, Washington, DC
46. Iyer, E.P.R., Iyer, S.C., **Wang, D.** and **Cox, D.N.** (2010). Functional Genomic Analyses of Transcriptional Regulation Mediating Class-IV da Neuron Dendrite Morphogenesis. The 51<sup>st</sup> Annual *Drosophila* Research Conference, Washington, DC (**Platform Oral Presentation**).
47. M. Chhina, S.D. Nathan, M. C. Emblom-Callahan, S. Ahmad, O.A Shlobin, M Lemma, J. E. Chang, R. Brenner, **D. Cox**, E. P. R. Iyer, S. Khandhar, and G. M. Grant (2010). *Immunohistochemistry Analysis for Proliferation Marker in IPF Lung Tissue*. Metropolitan DC Respiratory Society's 2010 Annual Research Meeting, Washington, DC.
48. Iyer, E.P.R., Iyer, S.C., **Wang, D.**, and **Cox, D.N.** (2010). Functional genomic analyses of transcriptional regulation mediating class specific neuronal dendrite morphogenesis. Bioinformatics and Computational Biology Graduate Student Symposium, George Mason University, Manassas, VA. (Awarded Best Oral Presentation).
49. Iyer, S.C., Kuntimaddi, A., Iyer, E.P.R. and **Cox, D.N.** (2010). The COPII coat protein Sec31 regulates da neuron dendrite morphogenesis. Bioinformatics and Computational Biology Graduate Student Symposium, George Mason University, Manassas, VA. (Awarded Best Poster Presentation).
50. **Shinwari, R.**, **Wang, D.**, Iyer, E.P.R., Chandramouli, S., and **Cox, D.N.** (2009). The *Drosophila* RhoGEF, Trio, regulates dendritic complexity via modulation of the actin cytoskeleton. Georgetown University Undergraduate Research Conference, Washington, DC.
51. **Shinwari, R.**, **Wang, D.**, Iyer, E.P.R., Chandramouli, S., and **Cox, D.N.** (2009). The *Drosophila* RhoGEF, Trio, regulates dendritic complexity via modulation of the actin cytoskeleton. Colonial Academic Alliance Undergraduate Research Conference, Towson University.







“Dissecting Class-Specific Dendrite Morphogenesis via Laser Capture Microdissection with Transcriptional Expression Profiling”

Role: Principal Investigator      Funding Agency: Jeffress Memorial Trust

This award supports research targeted at the development of novel cell isolation strategies, including magnetic bead based cell sorting and laser capture microdissection, designed to facilitate cell-specific genomic, miRNA, and proteomic profiling of *Drosophila* da neurons.

4. “Behavioral and inflammatory changes in a mouse model of late-onset Alzheimer’s Disease”

Role: Co-PI

Effective: July 1, 2011 – August 1, 2012

Funding Agency: Alzheimer’s and Related Diseases Research Award Fund, Virginia Center on Aging, Virginia Commonwealth University

This award supports research focused on characterizing late-onset Alzheimer’s Disease mice for behavioral anomalies and molecular dysregulation associated with inflammation.

5. GMU Provost Research Funding Award - 2010

Role: Principal Investigator

This internal award supports research into the epigenetic role of miRNA regulation on dendrite morphogenesis.

6. GMU College of Science Distance Education Curriculum Proposal Award - 2010

This competitive internal award supports the development of novel distance education course delivery methods for undergraduate Cell Biology.

**EXPERIENTIAL LEARNING FOCUSED FUNDING FOR TRAINING IN UNDERGRADUATE RESEARCH**

(14) Undergraduate Research Scholars Program (URSP) Award Winners (2009-14): Each award competitively supported @ \$1,500

Role: Mentor, PI

Total Funding: \$21,000

(4) Undergraduate Research Scholars Program (URSP) Full-Time Summer Research Award (2012-2014): Each award competitively supported @ \$5,000

Role: Mentor, PI

Total Funding: \$20,000

Students: Luis Sullivan (2012); Francis Aguisanda (2013); M. Jennifer Van (2014); Hyun Sung (2014)

(2) Research Semester Award, George Mason University

Role: Mentor

Effective: Fall 2012

Student: Atit Patel

Role: Mentor

Effective: Fall 2013

Student: Katharine Dickson

Total Funding: \$6,000

These competitively funded awards support a highly focused, experiential learning environment for research immersion and education/training.